

WHAT IS CLAIMED IS:

1 1. A method for remotely activating an appliance, the appliance
2 responding to an activation signal conforming to one of a plurality of radio
3 frequency activation schemes, the method comprising:
4 positioning a sensor proximate to the appliance, whereby the sensor
5 can determine whether or not the appliance is activated;
6 automatically transmitting a sequence of different activation signals,
7 each activation signal in the sequence conforming to one of the plurality of radio
8 frequency activation schemes;
9 receiving at least one signal from the sensor indicating appliance
10 activation;
11 determining which of the plurality of radio frequency activation
12 schemes resulted in transmitting an activation signal in the sequence of activation
13 signals that activated the appliance based on the at least one received sensor signal;
14 and
15 associating data representing the determined activation scheme with
16 a programmable remote control transmitter activation input.

1 2. The method of claim 1 wherein at least one of the plurality of
2 radio frequency activation schemes is a fixed code scheme and wherein transmitting
3 the sequence of activation signals comprises transmitting an activation signal having
4 each possible fixed code value.

1 3. The method of claim 1 wherein the plurality of radio
2 frequency activation schemes comprises a plurality of rolling code schemes and a
3 plurality of fixed code schemes and wherein transmitting a sequence of activation
4 signals comprises transmitting each activation signal based on a rolling code scheme
5 before transmitting an activation signal based on a fixed code scheme.

1 4. The method of claim 1 wherein receiving at least one signal
2 from the sensor comprises receiving a radio frequency signal from a remote sensor.

1 5. The method of claim 1 wherein the programmable remote
2 control transmitter is installed in a motor vehicle and wherein receiving at least one
3 signal from the sensor comprises receiving at least one signal from a vehicle-
4 mounted sensor.

1 6. The method of claim 1 wherein receiving at least one signal
2 from the sensor indicating appliance activation comprises receiving a first signal and
3 a second signal, the second signal confirming appliance activation by one of the
4 plurality of radio frequency activation schemes.

1 7. The method of claim 6 further comprising:
2 rapidly transmitting the sequence of activation signals prior to
3 receiving the first sensor signal; and
4 slowly transmitting at least a portion of the rapidly transmitted
5 sequence of activation signals prior to receiving the second sensor signal.

1 8. The method of claim 1 wherein at least a portion of the
2 sequence of activation signals has an order established by popularity of radio
3 frequency activation schemes, whereby an average time until receiving the at least
4 one sensor signal is decreased.

1 9. The method of claim 1 wherein the appliance is a mechanical
2 barrier mover and wherein the sensor is operative to sense motion of a mechanical
3 barrier moved by the mover.

1 10. The method of claim 1 wherein the appliance is a mechanical
2 barrier mover and wherein the sensor is operative to sense position of a mechanical
3 barrier moved by the mover.

1 11. The method of claim 1 wherein the sensor is operative to
2 sense light emitted by the appliance.

1 12. The method of claim 1 wherein the sensor is operative to
2 sense vibration emitted by the appliance.

1 13. The method of claim 1 wherein the sensor is operative to
2 sense electrical current drawn by the appliance.

1 14. The method of claim 1 wherein positioning a sensor proximate
2 to the appliance comprises positioning a motor vehicle.

1 15. A system for operating a remotely controlled appliance, the
2 appliance responding to a radio frequency activation signal exhibiting characteristics
3 of one of a plurality of activation schemes, the system comprising:

4 a sensor operative to generate at least one sensor signal in response
5 to the appliance;

6 a transmitter operative to transmit radio frequency activation signals,
7 each transmitted activation signal based on one of the plurality of activation
8 schemes;

9 memory operative to hold data representing one of the plurality of
10 activation schemes; and

11 control logic in communication with the sensor, the transmitter and
12 the memory, the control logic controlling the transmitter to transmit a sequence of
13 different activation signals, each activation signal in the sequence based on one of
14 the plurality of activation schemes, the control logic storing data into the memory
15 based on receiving the at least one sensor signal, the data indicating one of the
16 plurality of activation schemes which activated the appliance.

1 16. The system of claim 15 further comprising a user activation
2 input, the control logic controlling the transmitter to transmit an activation signal
3 having characteristics represented by the activation scheme stored in the memory
4 upon an assertion of the user activation input.

1 17. The system of claim 15 wherein at least one of the plurality
2 of activation schemes is a fixed code scheme and wherein the transmitter is

3 controlled to generate each activations signal in at least a portion of the sequence of
4 activation signals exhibiting a different possible fixed code value.

1 18. The system of claim 15 wherein the plurality of activation
2 schemes comprises a plurality of rolling code schemes and a plurality of fixed code
3 schemes and wherein the transmitter is controlled to transmit each of the rolling
4 code schemes before transmitting any of the fixed code schemes.

1 19. The system of claim 15 further comprising a sensor
2 transmitter for transmitting at least one radio frequency signal based on the at least
3 one sensor signal.

1 20. The system of claim 15 wherein the sensor is installed in a
2 motor vehicle.

1 21. The system of claim 15 wherein the sensor generates a first
2 sensor signal and a second sensor signal.

1 22. The system of claim 21 wherein the control logic is operative
2 to:
3 rapidly transmit the sequence of activation signals prior to receiving
4 the first sensor signal; and
5 slowly transmit at least a portion of the rapidly transmitted sequence
6 of activation signals prior to receiving the second sensor signal.

1 23. The system of claim 15 wherein the control logic controls the
2 transmitter to transmit at least a portion of the sequence of activation signals in an
3 order based on popularity of radio frequency activation schemes.

1 24. The system of claim 15 wherein the appliance is a mechanical
2 barrier mover and wherein the sensor senses motion of a mechanical barrier moved
3 by the mover.

1 25. The system of claim 15 wherein the appliance is a mechanical
2 barrier mover and wherein the sensor senses position of a mechanical barrier moved
3 by the mover.

1 26. The system of claim 15 wherein the sensor senses light
2 emitted by the appliance.

1 27. The system of claim 15 wherein the sensor senses vibration
2 emitted by the appliance.

1 28. The system of claim 15 wherein the sensor senses electrical
2 current drawn by the appliance.

1 29. A programmable appliance remote control comprising:
2 a controller operative in a learn mode and an operate mode, the
3 controller in learn mode generating transmitter control signals for transmitting each
4 of a sequence of different activation signals, each activation signal in the sequence
5 having characteristics based on one of a plurality of activation schemes, the
6 controller storing data representative of one activation scheme based on receiving
7 a sensor signal, the controller in operate mode generating transmitter control signals
8 based on the stored data in response to receiving an activation input signal;
9 a transmitter generating and transmitting an activation signal based
10 on transmitter control signals received from the controller;
11 a user interface generating the activation input signal in response to
12 user input; and
13 a sensor generating the sensor signal in response to a controllable
14 appliance.

1 30. The programmable appliance remote control of claim 29
2 wherein the sensor is mounted on an automotive vehicle.

1 31. The programmable appliance remote control of claim 29
2 wherein the sensor is remotely located from the controller.

1 32. The programmable appliance remote control of claim 29
2 wherein the transmitter is mounted on an automotive vehicle.

1 33. The programmable appliance remote control of claim 29
2 wherein the controller, the transmitter and the sensor are built into an automotive
3 vehicle.